January 13, 1952
Ref. yrs. 12/30&31/52

Dear Norton:

Just some notes in passing:

1) Method for studying adsorption of FA, phage simultaneously. Use heat-killed cells of various types for the adsorption. Fairly dilute cells can probably be used. Then add living cells, e.g., SW-414 to adsorb remaining phage. Plate at high concentration for transductions, dilute out to count infective centers.
2) What are you going to label in a tracer experiment to identify the cohorts! You can't presuppose that only phage particles will be labelled, and if you could what would you measure. Can you dilute the tracer 10^{-6} or more from a single phage particle?
3) Am running into some obscurities on the role of XII_2 as receptor. E.G., a paratyphi A that can be transinduced. Did you complete experiments on non-XII_2 variant S. typhi and S. pullorum? Do you have comparable data on the receptor range of any other transducing phages, e.g.PLT-7?
4) Have just sent a batch of reprints, labelled for local distribution. I hope I haven't overlooked anyone—please remind me if I have. Also, have sent a few mimeographed circulars—use at your own discretion. By all means go ahead with your distribution, but it would be well to collate the lists. What I sent is fairly complete, but some shipments' records are buried in another file, and I could only check individually.
5) H- of SW-414 seems to have an extraordinarily high rate of transinduction to +. Am checking with further titrations.
6) The lytic variant 22V picked up here probably is distinct from yours. It gives clear plaques on LT-2. Lysogenization-protection exp't completed in a preliminary way (I hope you know what I'm talking about), and shows that all (or as nearly all as can be measured) transductions occur in phage-infected bacteria. Further experiments should tie this down to the infected clones of the progeny of infected bacteria. I finally woke up that S. gal meant S. gallinarum and not EMS galac tose! Would you like to have 22V? Although it gives muddy plaques on SW-666, unfortunately it does not induce lysogenicity, so cannot be used as a marker in substitution experiments.
7) SW-435 is giving some reversions or near-reversions on D(0). Is this your experience?
8) UV'd PLT22 seems to give transductions separable from plaques on SW-414, or better, a new Gal- deriv. from SW-414, SW-950. I suppose it's just a matter of dose. The transductions here are non-lysogenic.
9) Adaptation of PLT22 to paraB is only partly reversible by cultivation back on LT2. Two mechanisms may be superimposed.
10) Levinthal suggests following for differential centrifugation. Use capillary tubing. Break into segments after centrifugation. Assay.

Sincerely,

Joshua Lederberg

P.S. Am leaving for Chamblee ca. 1/26. Returning directly.